I. CLAIM AMENDMENTS

Please amend the claims as indicated in the following listing:

1. (currently amended) A computer implemented process for creating a query for a database ~~located in a memory,~~ comprising:

    using a computer connected to a memory and to a database;

    a computer program stored in the memory, the memory, so configured by the computer program, causes the computer to perform steps comprising:

    receiving ~~wherein the computer implemented process causes a computer, responsive to~~ a user entry of a plurality of fields, a filter, and a sort criteria~~;~~;

    ~~to automatically identify~~identifying a set of necessary tables in the database that are required to respond to the user entry; and

    ~~to generate~~automatically generating a query having a clause linked to the set of necessary tables in the database;

    wherein ~~so that~~ the query ~~can only access~~accesses only the set of necessary tables in the database; and

    whereby unnecessary table joins are prevented.

2. (previously presented) The computer implemented process of claim 1 comprising:

    determining that a SQL template has a FROM clause placeholder and determining that a FROM clause table has been previously specified in the SQL template;

    responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, generating a FROM clause for the table;

determining that the SQL template has a JOIN clause placeholder and determining

that the FROM clause has been added; and

responsive to the determination that the SQL template has the JOIN clause

placeholder and that the FROM clause has been added, generating a JOIN clause.

3. (previously presented) The computer implemented process of claim 2 further comprising:

responsive to the determination that the SQL template has the FROM clause

placeholder and that the FROM clause table has not been previously specified in the SQL

template, adding the FROM clause to a FROM clause string; and

responsive to the determination that the SQL template has the JOIN clause

placeholder and that the FROM clause has not been added, adding the JOIN clause to a JOIN

clause string.

4. (previously presented) The computer implemented process of claim 2 further comprising:

generating a (join) WHERE clause;

adding the (join) WHERE clause to a (join) WHERE clause string;

adding an alias to an added aliases list; and

adding an optional where clause alias to an optional where clause aliases list.

5. (previously presented) The computer implemented process of claim 2 further comprising:

determining that a plurality of parameters are on an added aliases list; and

responsive to the determination that the parameters are not on the added aliases list,

performing the steps in claim 2.

6. (previously presented) The computer implemented process of claim 5 further comprising:

generating a SELECT clause;

generating a (filter) WHERE clause; and

generating an ORDER BY clause.

7. (previously presented) The computer implemented process of claim 5 further comprising:

responsive to the determination that all of the parameters have been analyzed,

determining that an optional where clause alias is on the added aliases list;

responsive to the determination that the optional where clause alias is on the added

aliases list, generating a (join) WHERE clause for the optional where clause alias; and

responsive to the determination that the optional where clause alias is on the added

aliases list, adding the (join) WHERE clause to a (join) WHERE clause string.

8. (previously presented) The computer implemented process of claim 5 further comprising:

replacing the FROM clause placeholder in the SQL template with a FROM clause

string;

replacing the JOIN clause placeholder in the SQL template with the a JOIN clause

string; and

adding a (join) WHERE clause string to a (filter) WHERE clause in the SQL

template.

9. (previously presented) The computer implemented process of claim 5 further comprising:

accepting a user submission of a field and a filter;

sending the query to the database; and

obtaining an output from the database.

10. (currently amended) A computer implemented process for creating a query for a database,

wherein the computer implemented process, responsive to a user entry of a plurality of

parameters, automatically identifies a set of necessary tables in the database and

automatically generates a query having a clause linked to the set of necessary tables that are

required to respond to the user entry~~so that the query can only access the set of necessary tables~~, the computer implemented process comprising:

determining that ~~a~~the plurality of parameters are on an added aliases list;

responsive to the determination that the parameters are not on the added aliases list, running a clause generation program;

determining that all of the parameters have been analyzed;

responsive to the determination that all of the parameters have been analyzed, determining that an optional where clause alias is on the added aliases list;

responsive to the determination that the optional where clause alias is on the added aliases list, generating a (join) WHERE clause for the optional where clause alias; and

responsive to the determination that the optional where clause alias is on the added aliases list, adding the (join) WHERE clause to a (join) WHERE clause string;

wherein the query only accesses the set of necessary tables in the database preventing unnecessary joins.

11. (previously presented) The computer implemented process of claim 10 wherein the clause generation program comprises:

determining that a SQL template has a FROM clause placeholder and determining that a FROM clause table has been previously specified in the SQL template;

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, generating a FROM clause for the table;

determining that the SQL template has a JOIN clause placeholder and determining that the FROM clause has been added; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, generating a JOIN clause.

12. (previously presented) The computer implemented process of claim 11 wherein the clause generation program further comprises:

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, adding the FROM clause to a FROM clause string; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, adding the JOIN clause to a JOIN clause string.

13. (previously presented) The computer implemented process of claim 11 wherein the clause generation program further comprises:

generating the (join) WHERE clause;

adding the (join) WHERE clause to the (join) WHERE clause string;

adding an alias to the added aliases list; and

adding the optional where clause alias to an optional where clause aliases list.

14. (previously presented) The computer implemented process of claim 10 further comprising:

generating a SELECT clause;

generating a (filter) WHERE clause; and

generating an ORDER BY clause.

15. (previously presented) The computer implemented process of claim 10 further comprising:

replacing the FROM clause placeholder in the SQL template with a FROM clause string;

replacing the JOIN clause placeholder in the SQL template with a JOIN clause

string; and

adding the (join) WHERE clause string to a (filter) WHERE clauses in the SQL

template.

16. (previously presented) The computer implemented process of claim 10 further comprising:

accepting a user submission of a field and a filter;

sending the query to the database; and

obtaining an output from the database.

17. (Currently amended) A program product operable on a computer, the program product

comprising:

a computer-usablereadable medium;

wherein the computer-readable-usable medium contains instructions encoded thereon

to cause a computer, responsive to a user entry of a plurality of fields, a filter, and a sort

criteria, to automatically identify a set of necessary tables in the database that are required to

respond to the user entry and to automatically generate a query having a clause linked to the

set of necessary tables in the database so that the query can only access the set of necessary

tables in the database and that unnecessary table joins are prevented, the instructions

comprising:

instructions for determining that a SQL template has a FROM clause

placeholder and determining that a FROM clause table has been previously specified

in the SQL template;

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for generating a FROM clause for the table;

instructions for determining that the SQL template has a JOIN clause placeholder and determining that the FROM clause has been added; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, instructions for generating a JOIN clause.

18. (original) The program product of claim 17 further comprising:

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for adding the FROM clause to a FROM clause string; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, instructions for adding the JOIN clause to a JOIN clause string.

19. (original) The program product of claim 17 further comprising:

instructions for generating a (join) WHERE clause;

instructions for adding the (join) WHERE clause to a (join) WHERE clause string;

instructions for adding an alias to an added aliases list; and

instructions for adding an optional where clause alias to an optional where clause aliases list.

20. (previously presented) The program product of claim 17 further comprising:

instructions for determining that a plurality of parameters are on the added aliases

list; and

responsive to the determination that the parameters are not on the added aliases list,

instructions for performing the steps in claim 17.

21. (original) The program product of claim 20 further comprising:

instructions for generating a SELECT clause;

instructions for generating a (filter) WHERE clause; and

instructions for generating an ORDER BY clause.

22. (previously presented) The program product of claim 20 further comprising:

responsive to the determination that all of the parameters have not been analyzed,

instructions for determining that the optional where clause alias is on the added aliases list;

responsive to the determination that the optional where clause alias is on the added

aliases list, instructions for generating a (join) WHERE clause for the optional where clause

alias; and

responsive to the determination that the optional where clause alias is on the added

aliases list, instructions for adding the (join) WHERE clause to a (join) WHERE clause

string.

23. (previously presented) The program product of claim 20 further comprising:

instructions for replacing the FROM clause placeholder in the SQL template with a

FROM clause string;

instructions for replacing the JOIN clause placeholder in the SQL template with a

JOIN clause string; and

instructions for adding a (join) WHERE clause string to a (filter) WHERE clause in the SQL template.

24. (original) The program product of claim 20 further comprising:

instructions for accepting a user submission of a field and a filter;

instructions for sending a query to a database; and

instructions for obtaining an output from the database.

25. (Currently amended) A program product operable on a computer, the program product comprising:

a computer-usable medium;

wherein the computer usable medium contains instructions to cause a computer, responsive to a user entry of a plurality of fields, a filter, and a sort criteria, to automatically identify a set of necessary tables in the database that are required to respond to the user entry and to automatically place a (join) WHERE clause into a query for a database so that the query can only accessaccesses the set of necessary tables in the database preventing unnecessary table joins, comprising:

instructions for determining that a plurality of parameters are on an added aliases list;

responsive to the determination that the parameters are not on the added aliases list, instructions for running a clause generation program;

determining that all of the parameters have been analyzed;

responsive to the determination that all of the parameters have been analyzed, instructions for determining that an optional where clause alias is on the added aliases list;

responsive to the determination that the optional where clause alias is on the added aliases list, instructions for generating the (join) WHERE clause for the optional where clause alias; and

responsive to the determination that the optional where clause alias is on the added aliases list, instructions for adding the (join) WHERE clause to a (join) WHERE clause string.

26. (previously presented) The program product of claim 25 wherein the clause generation program comprises:

instructions for determining that a SQL template has a FROM clause placeholder and determining that a FROM clause table has been previously specified in the SQL template;

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for generating a FROM clause for the table;

instructions for determining the SQL template has a JOIN clause placeholder and determining whether the FROM clause has been added; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, instructions for generating a JOIN clause.

27. (original) The program product of claim 26 wherein the clause generation program further comprises:

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for adding the FROM clause to a FROM clause string; and

responsive to the determination that the SQL template has the JOIN clause

placeholder and that the FROM clause has not been added, instructions for adding the JOIN

clause to a JOIN clause string.

28. (original) The program product of claim 26 wherein the clause generation program further

comprises:

      instructions for generating the (join) WHERE clause;

      instructions for adding the (join) WHERE clause to the (join) WHERE clause string;

      instructions for adding an alias to the added aliases list; and

      instructions for adding the optional where clause alias to an optional where clause

aliases list.

29. (original) The program product of claim 26 further comprising:

      instructions for generating a SELECT clause;

      instructions for generating a (filter) WHERE clause; and

      instructions for generating an ORDER BY clause.

30. (previously presented) The program product of claim 26 further comprising:

      instructions for replacing the FROM clause placeholder in the SQL template with a

FROM clause string;

      instructions for replacing the JOIN clause placeholder in the SQL template with a

JOIN clause string; and

      instructions for adding the (join) WHERE clause string to a (filter) WHERE clause

in the SQL template.

31. (original) The program product of claim 25 further comprising:

      instructions for accepting a user submission of a field and a filter;

instructions for sending a query to a database; and

instructions for obtaining an output from the database.

32. (Currently amended) A program product operable on a computer, the program product

comprising:

a computer-usable medium;

wherein the computer usable medium contains instructions to cause a computer,

responsive to a user entry of a plurality of fields, a filter, and a sort criteria, to automatically

identify a set of necessary tables in the database that are required to respond to the user entry

and to automatically generate a query having a clause linked to the set of necessary tables

so that the query can only accessaccesses the set of necessary tables in the database

preventing unnecessary table joins, comprising:

a query program, wherein the query program queries a database using a query;

a query generation program, wherein the query generation program generates

a query having only the necessary joins for the query; and

a clause generation program, wherein the clause generation program

determines which clauses are necessary in the query.

33. (previously presented) The program product of claim 32, wherein the query generation

program comprises:

instructions for determining that a plurality of parameters are on an added aliases list;

responsive to the determination that the parameters are not on the added aliases list,

instructions for running the clause generation program;

responsive to the determination that all of the parameters have not been analyzed,

instructions for determining that an optional where clause alias is on the added aliases list;

responsive to the determination that the optional where clause alias is on the added

aliases list, instructions for generating a (join) WHERE clause for the optional where clause

alias; and

responsive to the determination that the optional where clause alias is on the added

aliases list, instructions for adding the (join) WHERE clause to a (join) WHERE clause

string.

34. (original) The program product of claim 33, wherein the query generation program further

comprises:

instructions for generating a SELECT clause;

instructions for generating a (filter) WHERE clause; and

instructions for generating an ORDER BY clause.

35. (previously presented) The program product of claim 33, wherein the query generation

program further comprises:

instructions for replacing the FROM clause placeholder in the SQL template with the

FROM clause string;

instructions for replacing the JOIN clause placeholder in the SQL template with the

JOIN clause string; and

instructions for adding the (join) WHERE clause string to the (filter) WHERE clauses

in an SQL template.

36. (previously presented) The program product of claim 32, wherein the clause generation

program comprises:

instructions for determining that a SQL template has a FROM clause placeholder and

determining that a FROM clause table has been previously specified in the SQL template;

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for generating a FROM clause for the table;

instructions for determining whether the SQL template has a JOIN clause placeholder and determining that the FROM clause has been added; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, instructions for generating a JOIN clause.

37. (original) The program product of claim 36, wherein the clause generation program further comprises:

responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, instructions for adding the FROM clause to a FROM clause string; and

responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, instructions for adding the JOIN clause to a JOIN clause string.

38. (original) The program product of claim 36, wherein the clause generation program further comprises:

instructions for generating a (join) WHERE clause;

instructions for adding the (join) WHERE clause to a (join) WHERE clause string;

instructions for adding an alias to an added aliases list; and

instructions for adding an optional where clause alias to an optional where clause aliases list.

39. (original) The program product of claim 32, wherein the query program comprises:

       instructions for accepting a user submission of a field and a filter;

       instructions for sending the query to the database; and

       instructions for obtaining an output from the database.